

CLAIMS:

1. Equipment for producing carbonated water, comprising water supplying means, carbonic acid gas supplying means and a static mixer having 20 to 100 elements.

2. The equipment for producing the carbonated water according to claim 1, wherein the water supplying means comprises a water vessel and a plurality of circulation pumps for circulating water in the water vessel via the static mixer, and the plurality of the circulation pumps are connected in series.

3. The equipment for producing the carbonated water according to claim 2, wherein a gas-liquid separator is disposed downstream of the static mixer.

4. A process for producing carbonated water, wherein a carbonic acid gas is dissolved in water by supplying the water and the carbonic acid gas to a static mixer having 20 to 100 elements.

5. The process for producing the carbonated water according to claim 4, wherein a formula (1) is satisfied with a premise that a number of elements of the static mixer is N pieces, and a Reynolds number when a mixture of water and a carbonic acid gas flow in the static mixer is Re:

$$100,000 \leq \text{Re} \times N \leq 2,000,000 \dots (1).$$

6. The process for producing the carbonated water

according to any one of claims 4 and 5, wherein a formula (2) is satisfied with a premise that the carbonated water is produced by supplying the mixture of the water and the carbonic acid gas to the static mixer for only one time, a flow rate of the carbonic acid gas to be supplied is X (L/min) and a flow rate of the water to be supplied is Y (L/min):

$$0.5 \leq X/Y \leq 1.2 \dots (2).$$

7. The process for producing the carbonated water according to any one of claims 4 and 5, wherein a formula (3) is satisfied with a premise that the carbonated water is produced by circulating the water in a water vessel via the static mixer, the flow rate of the carbonic acid gas to be supplied is X (L/min) and the flow rate of the water to be supplied is Y (L/min):

$$0.3 \leq X/Y \leq 1.0 \dots (3).$$